



IDAHO DEPARTMENT OF
HEALTH & WELFARE

Bureau of Community and Environmental Health

Lead Exposure and Kidney Disease:
Information for the Public

What do my kidneys do, and what is kidney disease?

Your two kidneys, each about the size of a fist, are located below your ribcage on either side of your spine. Their main job is to filter waste products and excess fluid from your blood.

Kidney health is described in terms of "renal function." Full or 100% renal function means you have two healthy kidneys. This is actually more than your body needs. This is why a healthy person can donate one kidney and stay healthy with only one kidney, or 50% renal function. If your renal function is reduced because of disease, it can keep getting worse until you have only 5-10% kidney function left. This is called End Stage Renal Disease (ESRD) and means you must get a kidney transplant or have dialysis to stay alive.

Some kidney damage happens quickly, such as an injury or acute poisoning, but most kidney disease destroys the kidneys slowly and without warning signs. Once you have kidney disease, it cannot be cured, but the progression can be slowed with proper care. Some things to be careful about are listed at the end of this fact sheet.

What is the relationship between lead exposure and kidney disease?

Exposure to high levels of lead can increase your risk of developing kidney disease. Lead exposure could begin damaging your kidneys, but may not be evident as Kidney Disease for many years or even decades. Also, since lead can be stored in bones and released again years later, the kidneys can be re-exposed. In fact, advanced kidney disease can cause the release of lead that is stored in bone.

What about kidney disease and high blood pressure?

Kidney disease has a complex relationship with high blood pressure. Both conditions can worsen each other, and lead exposure increases the risk for both conditions. High blood pressure is easier to test for, and so is usually detected first unless a kidney screening test is done. This can be a blood or urine test.

What can worsen the health of my kidneys?

The two major causes of kidney disease are:

- Diabetes.
- High blood pressure.

Kidney disease can also be caused or worsened by:

- High cholesterol levels.
- Heredity.
- Some infections.
- Exposure to poisons or toxic substances, such as lead or cadmium.
- Overuse of certain drugs (both prescription and over-the-counter).

What should I discuss with my doctor?

- Ask your doctor about things that can harm your kidneys, such as those on the list above, and what you can do to prevent kidney disease.
- Ask your doctor to watch you for diabetes, high blood pressure, and kidney disease if you were exposed to high levels of lead.
- If you have diabetes, high blood pressure, or kidney disease, ask your doctor about how to keep them under control, and then follow the advice carefully.
- Make sure your doctor knows you were exposed to high levels of lead.

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